

ROAD PLAN MAP

March 17, 2006

Sale Name:Springbored

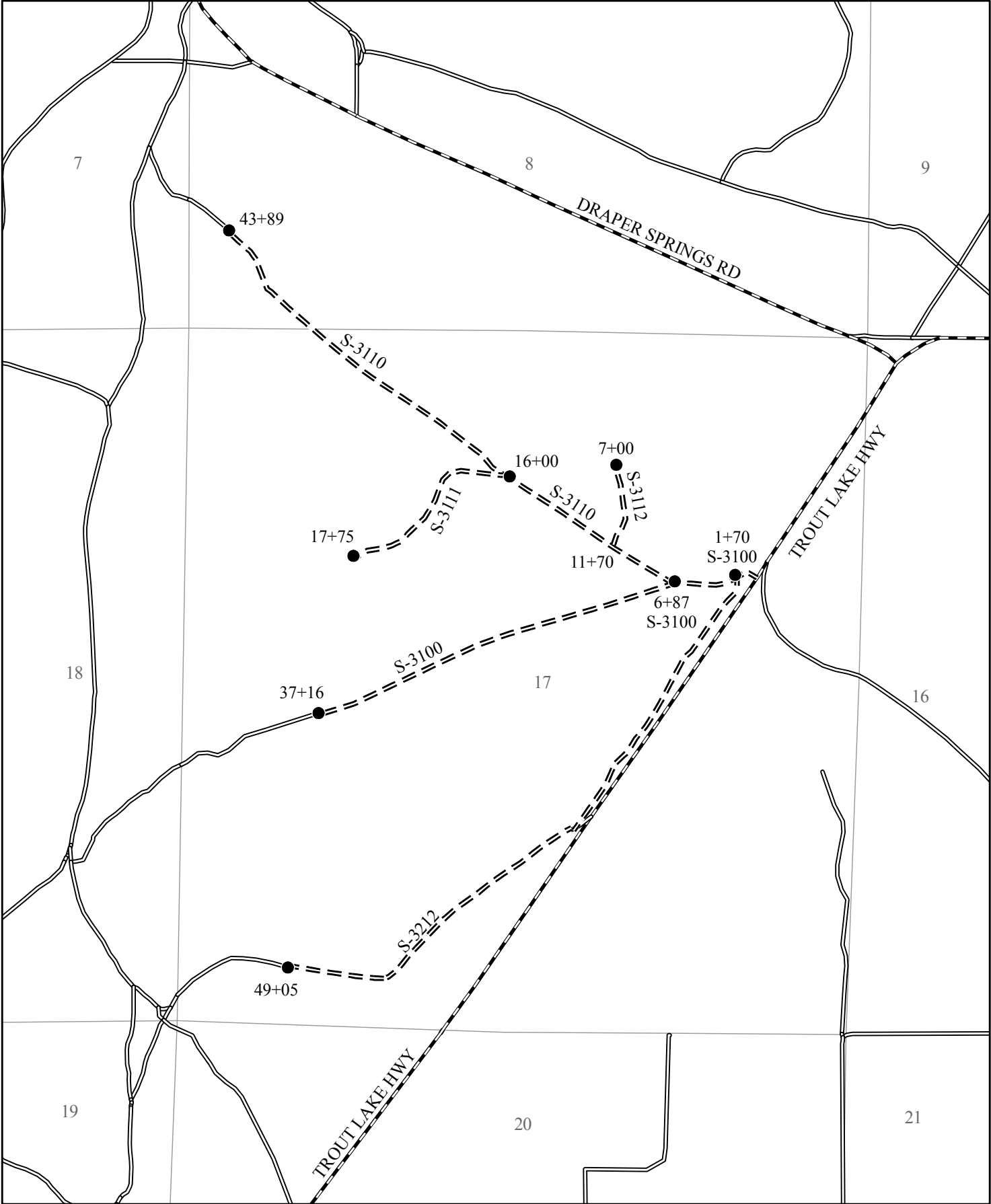
Agreement Number:30-078761

Trust:Normal School (08) & Common School

Region:Southeast

County:Klickitat

Township 6 North, Range 12 East, W.M.



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J. Mattson

- STATION
- ROADS
 - COUNTY
 - EXISTING
 - === PRE-HAUL MAINTENANCE

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES
DOUG SUTHERLAND, COMMISSIONER OF PUBLIC LANDS

TIMBER SALE ROAD PLAN
SECTION 17, TOWNSHIP 6 NORTH, RANGE 12 EAST, W.M.
KLICKITAT COUNTY

AGREEMENT NO.: 30-078761 DATE: MARCH 17, 2006

SECTION 0 - SCOPE OF PROJECT

This project includes, but is not limited to pre-haul maintenance including:
brushing right of way;
constructing rolling dips;
grading and shaping existing road surface and turnouts;
acquisition and application of rock;
post haul road work.

SECTION 1: GENERAL CLAUSES

SECTION 1.1: GENERAL: GENERAL CLAUSES

1.1-1 Clauses in this plan apply to all pre-haul maintenance including landings unless otherwise noted.

1.1-2 Pre-haul maintenance of the following roads is required. All roads shall be pre-haul maintained on the State’s location and in accordance with this Road Plan.

<u>Road</u>	<u>Station</u>	<u>Type</u>
S-3100	0+00 to 37+16	Pre-haul Maintenance
S-3110	0+00 to 43+89	Pre-haul Maintenance
S-3111	0+00 to 17+75	Pre-haul Maintenance
S-3112	0+00 to 7+00	Pre-haul Maintenance
S-3212	0+00 to 49+05	Pre-haul Maintenance

1.1-4 If the purchaser desires a road location or design change, a revised road plan shall be submitted to the State for consideration.

1.1-6 Pre-haul maintenance on the following road may be in close proximity above ground and/or buried utilities. All work shall be done in accordance with RCW 19.122, Underground Utilities. Purchaser is responsible for all notification and liabilities associated with the utilities and their rights-of-way.

<u>Road</u>	<u>Station</u>	<u>Type</u>
S-3100	0+00 to 1+00	Pre-haul Maintenance

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On this plan quantities are minimum acceptable values. Additional quantities required by the State because of hidden conditions or Purchaser’s choice of construction season or techniques shall be at the Purchaser’s expense. Hidden conditions include, but are not limited to: solid subsurface rock subsurface springs, saturated ground, and unstable soil.

SECTION 1.2 - GENERAL: CONSTRUCTION CONSTRAINTS

1.2-1

The pre-haul maintenance of any roads specified herein shall not be permitted between October 31 and May 1 unless authority to do so is granted, in writing, by the Contract Administrator.

<u>Road</u>	<u>Station</u>
S-3100	0+00 to 37+16
S-3110	0+00 to 43+89
S-3111	0+00 to 17+75
S-3112	0+00 to 7+00
S-3212	0+00 to 49+05

SECTION 1.2.1 - GENERAL: CONSTRUCTION CONSTRAINTS:
CONSTRUCTION SEQUENCE

1.2.1-1

Clearing and grubbing shall be completed prior to starting excavation and embankment.

Rolling dips shall be installed in completed subgrade as construction progresses.

Shaping of subgrade shall be completed and are subject to written approval by the Contract Administrator prior to rock application.

SECTION 1.3 - GENERAL: HAULING CONSTRAINTS

1.3-1

On the following roads, rock hauling shall not be permitted between the dates listed unless authorized, in writing, by the Contract Administrator.

<u>Road</u>	<u>Closure Period</u>
S-3100	October 31 to May 1

1.3-2

On the following roads, timber haul shall not be permitted between the dates listed unless authorized, in writing, by the Contract Administrator.

<u>Road</u>	<u>Closure Period</u>
S-3100	October 31 to May 1
S-3110	October 31 to May 1
S-3111	October 31 to May 1
S-3112	October 31 to May 1
S-3212	October 31 to May 1

SECTION 1.5 - GENERAL: ROAD MAINTENANCE

1.5-1 Maintenance on the following roads shall be performed in accordance with Forest Access Road Maintenance Specifications.

<u>Road</u>	<u>Stations</u>
S-3100	0+00 to 37+16
S-3110	0+00 to 43+89
S-3111	0+00 to 17+75
S-3112	0+00 to 7+00
S-3212	0+00 to 49+05

1.5-3 On the following roads, snowplowing shall not be permitted unless authorized, in writing, by the Contract Administrator.

<u>Road</u>	<u>Stations</u>
S-3100	0+00 to 37+16
S-3110	0+00 to 43+89
S-3111	0+00 to 17+75
S-3112	0+00 to 7+00
S-3212	0+00 to 49+05

SECTION 4 - DEBRIS DISPOSAL AND REMOVAL

SECTION 4.1 - DEBRIS DISPOSAL AND REMOVAL: GENERAL

4.1-1 Right-of-way debris is defined as all non-merchantable vegetative material larger than one cubic foot in volume, within the grubbing limits.

SECTION 4.2 - DEBRIS DISPOSAL AND REMOVAL: PLACEMENT

4.2-2 Right-of-way debris shall not be placed against standing timber

4.2-3 Right-of-way debris shall be scattered outside the clearing limits.

4.2-5 On the following roads, vegetative material including limbs up to 3 inches in diameter shall be cut and removed in accordance with Clause 4.2-3 and as shown on the Brushing Section Detail Sheet. Vegetative material shall be cut as near flush with the ground as possible, but shall not extend more than 3 inches above the ground.

<u>Road</u>	<u>Stations</u>
S-3100	0+00 to 37+16
S-3110	0+00 to 43+89
S-3111	0+00 to 17+75
S-3112	0+00 to 7+00
S-3212	0+00 to 49+05

SECTION 5 - EXCAVATION

SECTION 5.1 - EXCAVATION: GENERAL

5.1-6 On the following roads, the existing subgrade shall be widened to the dimensions shown on the Typical Section Sheet.

<u>Road</u>	<u>Stations</u>
S-3100	0+00 to 37+16
S-3110	0+00 to 43+89
S-3111	0+00 to 17+75
S-3112	0+00 to 7+00
S-3212	0+00 to 49+05

5.1-23 On the following roads, the Purchaser shall notify the State a minimum of 14 calendar days before work shall occur on the following roads. The Contract Administrator or written designee shall be on site while work is in progress.

<u>Road</u>	<u>Stations</u>
S-3100	0+00 to 37+16
S-3110	0+00 to 43+89
S-3111	0+00 to 17+75
S-3112	0+00 to 7+00
S-3212	0+00 to 49+05

SECTION 6 - DRAINAGE

SECTION 6.1 - DRAINAGE: SURFACE DRAINAGE

6.1-1 On the following roads, surfaces shall be shaped to augment the escape of surface runoff.

<u>Road</u>	<u>Stations</u>	<u>Shape of Road Surface</u>
S-3100	0+00 to 37+16	Outslope 4 inches in 10 feet
S-3110	0+00 to 43+89	Outslope 4 inches in 10 feet
S-3111	0+00 to 17+75	Outslope 4 inches in 10 feet
S-3112	0+00 to 7+00	Outslope 4 inches in 10 feet
S-3212	0+00 to 49+05	Outslope 4 inches in 10 feet

6.1-2 Berms shall be removed from road shoulders to permit escape of runoff.

SECTION 6.7: DRAINAGE: ROLLING DIPS

6.7-1
Springbored Timber Sale
Contract # 30-078761

On the following roads rolling dips shall be constructed in accordance with the Rolling Dip Detail sheet at locations as specified on the Rolling Dip List. **ROLLING DIPS SHALL BE INSTALLED AT THE TIME OF CONSTRUCTION AND SHALL BE CONTINUOUSLY MAINTAINED IN AN OPERABLE CONDITION.** Rolling dips shall be installed with a crawler tractor. Use of other equipment shall not be permitted without prior written approval of the Contract Administrator.

<u>Road</u>	<u>Station</u>	<u>Comment</u>
S-3100	5+03	Construct as per detail with lead-out right at low spot
S-3110	13+60	Construct as per detail with lead-out right at low spot

SECTION 7 - ROCK

SECTION 7.1 - ROCK SOURCE

7.1-5
Rock for county road approach under this contract may be obtained from any commercial source as approved in writing by the Contract Administrator. Rock specification shall be in accordance with Clause 7.2.1-3.

SECTION 7.2 - ROCK: MANUFACTURE

SECTION 7.2-1 - ROCK: MANUFACTURE: SPECIFICATIONS

7.2.1-3
1 ¼ INCH MINUS CRUSHED ROCK

%	Passing 1 ¼ ” square sieve.....	100%
%	Passing 5/8” square sieve.....	50 – 80%
%	Passing ¼ ” sieve.....	30 – 50%
%	Passing U.S. #40 sieve.....	3 – 18%
%	Passing U.S. #200 sieve.....	5%

All percentages are by weight.
The portion of ballast retained on ¼ inch sieve shall not contain more than 0.1 percent vegetative debris or trash.

SECTION 7.2.2 - ROCK: MANUFACTURE: MEASUREMENT

7.2.2-1
Measurement of the 1 ¼” minus rock shall be on a cubic-yard-truck measure basis. The purchaser shall provide and maintain load tally sheets from the commercial source for each truck and shall give them to the Contract Administrator.

SECTION 7.4 - ROCK: APPLICATION

SECTION 7.4.2 - ROCK: APPLICATION: PLACEMENT

7.4.2-1
On the following road, apply at least the minimum required rock quantity as shown on the Typical Section Sheet.

<u>Road</u>	<u>Stations</u>
S-3100	0+00 to 1+70

7.4.2-2
Subgrade shall be subject to approval, in writing, by the Contract Administrator prior to application of rock.

7.4.2-3
A grader shall be used to shape the subgrade prior to application of rock. The finished subgrade shall be in accordance with Clause 6.1-1 and shall be smooth, firm and free of ruts and chuckholes.

SECTION 7.4.3 - ROCK: APPLICATION: COMPACTION

7.4.3-1
On the following roads, 1 ¼” minus rock shall be spread and compacted full width in one six inch lift, uncompacted depth. Compaction shall be by motor grader. The finished surface shall be shaped as specified in Clause 6.1-1 and shall be smooth firm and free of chuckholes and ruts.

<u>Road</u>	<u>Stations</u>
S-3100	0+00 to 1+70

SECTION 8 - STRUCTURES

SECTION 8.1 - STRUCTURES: SIGNS

8.1-2
The Purchaser shall be responsible for the purchase and installation of the following road signs. Signs shall comply with the U.S. Department of Transportation, Federal Highway Administration's "Standard Highway Signs" manual.

<u>Road</u>	<u>Location</u>	<u>Sign</u>
Trout Lake Highway	500’ each side of junction with S-3100	Trucks Entering Roadway

SECTION 8.5 - STRUCTURES: CATTLE GUARDS/GATES

8.5-5
On the following road, Purchaser shall maintain and keep closed, except for during periods of timber haul, the existing four-wire gate.

<u>Road</u>	<u>Stations</u>
S-3100	0+35

SECTION 9 – POST HAUL ROAD WORK

SECTION 9.1 - POST HAUL ROAD WORK:
ROAD AND LANDING FINAL MAINTENANCE

9.1-1

At termination of haul, final maintenance shall be performed on the following road(s).

<u>Road</u>	<u>Stations</u>	<u>Type</u>
S-3100	0+00 to 37+16	Light
S-3110	0+00 to 43+89	Light
S-3212	0+00 to 49+05	Light

9.1-1A

Light final maintenance shall consist of:

- blading the road and landings with a motor grader;
- removing berms;
- crowning or out-sloping the road as specified in the Typical Section Sheet and/or Clause 6.1-1;
- reshaping rolling dips to specification;
- constructing drivable water bars in conformance with the attached "Drivable Water Bar Detail" in accordance with the following table.

<u>Road</u>	<u>Location</u>	<u>Number to be Installed</u>
S-3100	As directed by Contract Administrator	5
S-3110	As directed by Contract Administrator	7
S-3212	As directed by Contract Administrator	7

The finished road surfaces shall drain freely and shall be smooth, firm and free of chuckholes.

SECTION 9.3 - POST HAUL ROAD WORK: ROAD AND LANDING ABANDONMENT

9.3-1

The following road shall be abandoned by the Purchaser prior to the termination of this contract and in accordance with Clause 9.3-1A.

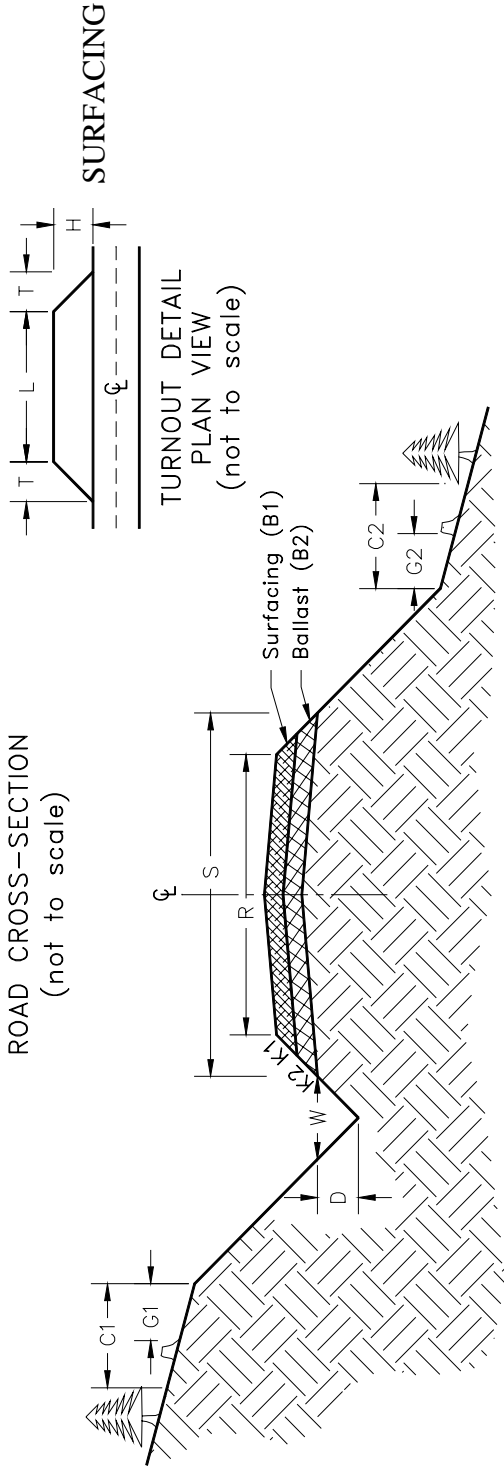
<u>Road</u>	<u>Stations</u>	<u>Type</u>
S-3111	0+00 to 17+75	Light
S-3112	0+00 to 7+00	Light

9.3-1A

Light Abandonment shall consist of:

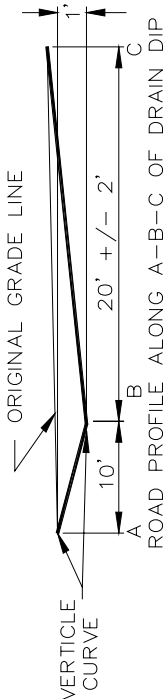
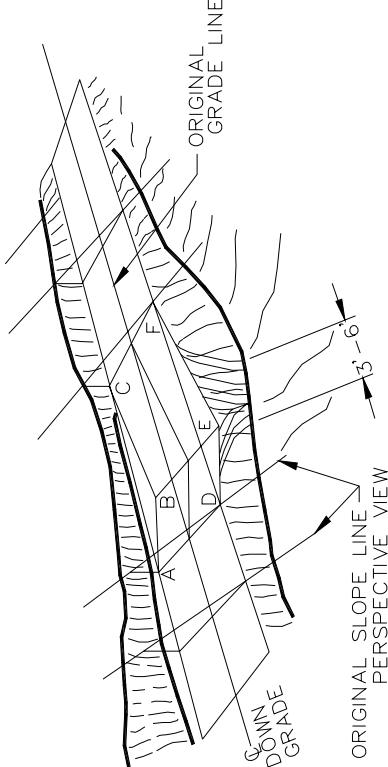
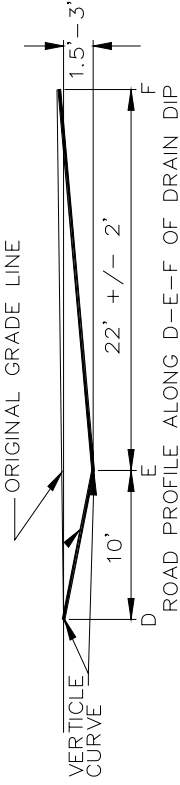
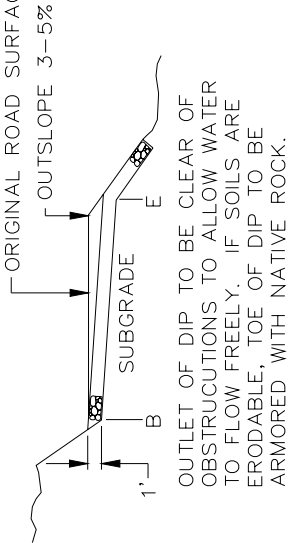
- ripping the road surface to a minimum depth of six inches;
- scattering of slash on road surface as directed by the Contract Administrator.

ROCK LIST

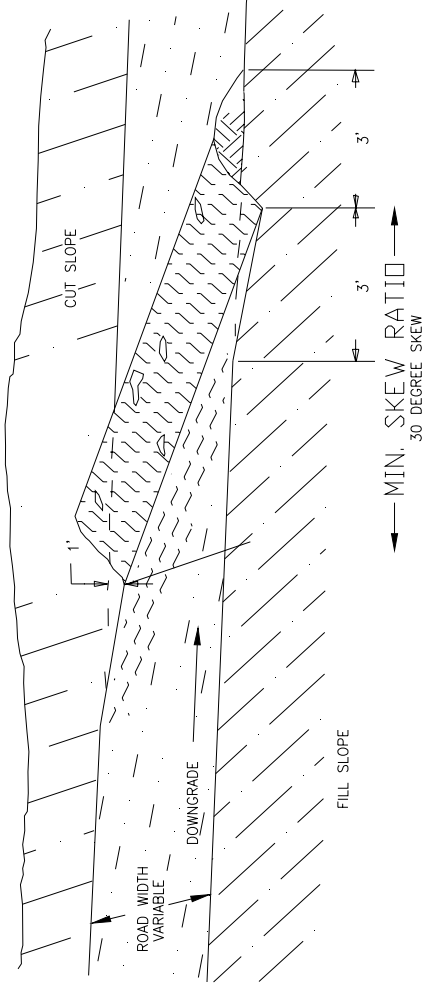


Road Number	From Station	To Station	Rock Slope K1	Uncompacted Rock Depth B1	C.Y./ Station	# of Stations	C.Y. Subtotal	Rock Source	Turnout		
									Length L	Width W	Taper
S-3100	0+00	1+70	2:1	6"	24	1.70	40	Commercial	N/A	N/A	N/A

SURFACING TOTAL 40 Cubic Yards

<div>ROLLING DIP DETAIL</div>		
	<p>NOTE: PLAN OF DIP SHOWN IS FOR OUTSLOPED ROLLING DIP. DIPS MAY BE EITHER INSLOPED OR OUTSLOPED. WHEN INSLOPED, DIPS SHALL DRAIN FREELY INTO DITCHES OR CULVERT INLETS. WHEN OUTSLOPED, THEY SHALL DRAIN FREELY ONTO NATURAL GROUND. WHERE SOILS ARE ERODABLE, OUTLET SHALL BE ARMORED WITH NATIVE ROCK. THE MINIMUM CROSS GRADE FROM 'B' TO 'E' IS 4% GREATER THAN THE ROAD SURFACE SLOPE. SKEW LINE B-E TO FIT LOW POINT IN DRAW, IF LOCATED IN NATURAL DRAIN.</p> 	
		

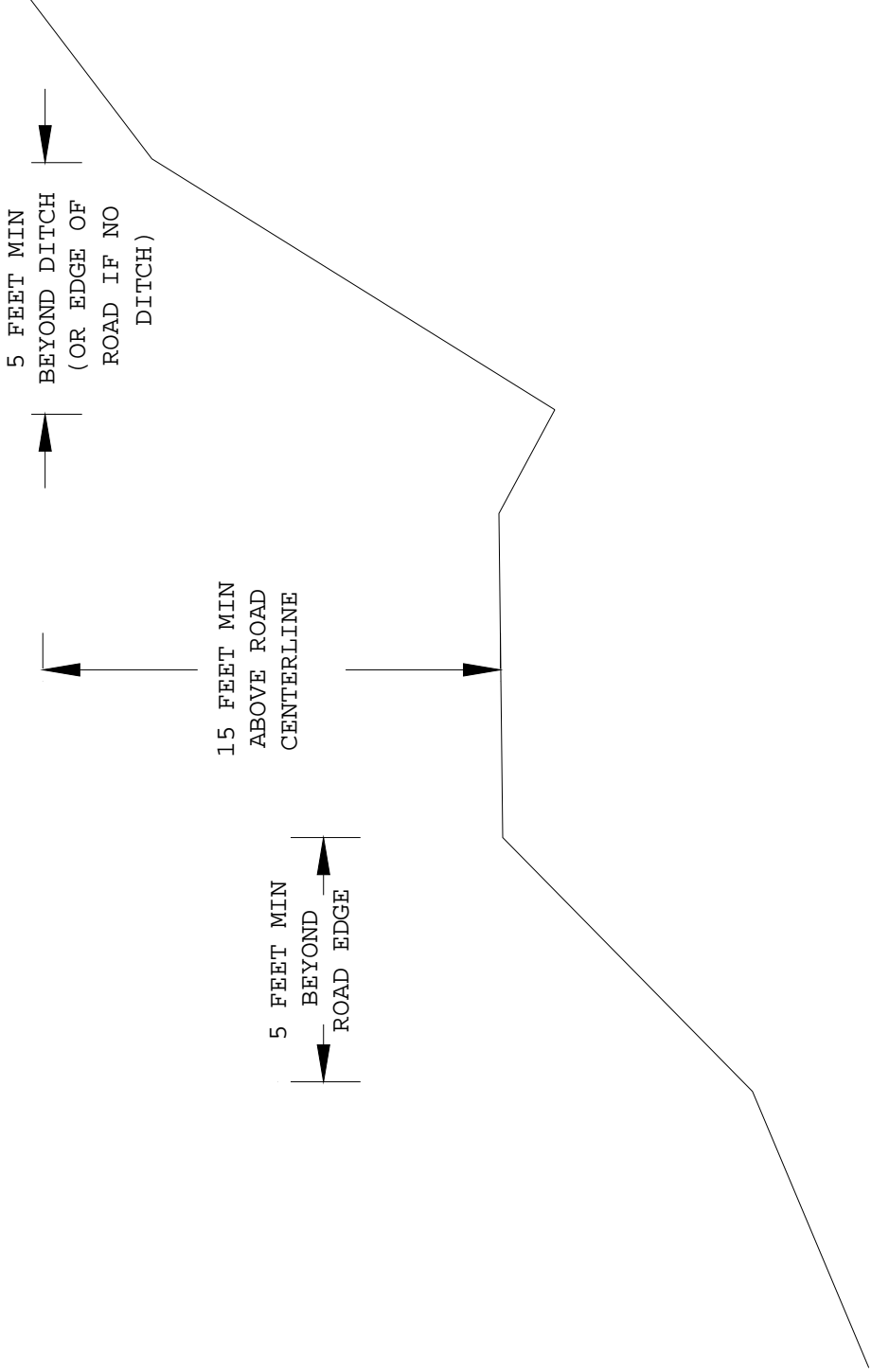
DRIVABLE WATER BAR DETAIL



NOTES

1. ALL WATER BARS SHALL BEGIN AT THE INTERSECTION OF THE ROADBED AND CUT SLOPE AND RUN ACROSS THE ENTIRE WIDTH OF THE ROADBED.
2. ALL WATER BARS SHALL HAVE FREE FLOWING OUTLETS.

BRUSHING DETAIL



STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

FOREST ACCESS ROAD
MAINTENANCE SPECIFICATIONS

A. Cuts and Fills

1. Maintain slope lines as constructed. Remove slides from the ditches and roadway. Replace fills to 1 1/2:1 slopes with selected material or as directed. Remove overhanging material from the cut slopes.
2. Material from slides or other sources requiring removal shall not be deposited in streams or at locations where it will erode into streams or watercourses.
3. Undesirable slide materials and debris shall not be mixed into the surface material.

B. Surface

1. Grade and shape the road surface, turnouts, and shoulders to the original crown, inslope or outslope as directed to provide suitable traveled surface and surface water runoff in an even, unconcentrated manner.
2. Blading must not undercut the backslope at the bottom of the ditchline or cut into geotextile fabric on the road.
3. If required in writing by the SE Region Engineer, water shall be applied as necessary to abate dust.
4. Desirable surface material shall not be bladed off the roadway.
5. Replace surface material lost or worn away.
6. Remove berms except as directed by the State.
7. Barrel spread soft spots to prevent degradation of geotextile.

C. Drainage

1. Keep ditches and drainage channels at outlets and inlets of culverts clear of obstructions and functioning as intended.
2. Inspect and clean culverts at least monthly, with additional inspections during storms and periods of high runoff. This must be done even during periods of inactivity.
3. Add stable material at the outlet end of the cross drain culvert as needed to stabilize the soil.
4. Headwalls: maintain to the road shoulder level with material that will resist erosion.
5. Prevent sediment bearing surface runoff from entering live streams.

D. Structures

Repair bridges, culverts, cattle guards, fences, and other road structures to the condition required by the construction specifications.

E. End of Season

Do maintenance work to minimize damage from the elements such as blading to insure correct runoff, ditch, and culvert cleaning and water bars.

F. Debris

Remove fallen timber, limbs, and stumps from the slopes or roadway.